AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application.

Listing of Claims:

Claim 1-11 (canceled)

Claim 12 (currently amended): A method of manufacturing a Group III nitride semiconductor device, comprising:

a step of growing at least two Group III nitride semiconductor crystal substrates of semiconductor-device-scale dimension on a starting substrate;

a step of growing at least one device-forming Group III nitride semiconductor crystal layer on each said Group III nitride semiconductor crystal substrate; and

a step of separating, from said starting substrate, Group III nitride semiconductor ~~crystals~~ devices that are constituted by said Group III nitride semiconductor crystal substrates and said device-forming Group III nitride semiconductor crystal layers; characterized in that

said Group III nitride semiconductor ~~crystals~~ devices each are 10 μm or more but 600 μm or less in thickness, and each are 0.2 mm or more but 50 mm or less in width.

Claim 13 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that the principal faces of said Group III nitride semiconductor crystal substrates together are made smaller in area than the principal face of said starting substrate.

Claim 14 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that said step of growing at least two said Group III nitride semiconductor crystal substrates includes:

a step of forming on said starting substrate a mask layer having at least two windows; and

a step of growing each said Group III nitride semiconductor crystal substrate at least on an open surface of said starting substrate below a respective one of said windows in said mask layer.

Claim 15 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 14, characterized in that said windows each are formed from a group composed of at least two micro-apertures.

Claim 16 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that said step of growing at least two said Group III nitride semiconductor crystal substrates includes:

a step of disposing at least two seed crystals on said starting substrate; and

a step of growing said Group III nitride semiconductor crystal substrates with said seed crystals as their respective nuclei.

Claim 17 (currently amended): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that whichever of an etching, lasing, or cleaving method is used in said step of separating, from said starting substrate, said Group III nitride semiconductor ~~crystal~~ devices constituted by said Group III nitride semiconductor crystal substrates and said device-forming Group III nitride semiconductor crystal layers.

Claim 18 (currently amended): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that the conformation of said Group III nitride semiconductor crystal substrates and said device-forming Group III nitride semiconductor crystal layers is hexagonal-platelike, rectangular-platelike, or triangular-platelike.

Claim 19 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that said Group III

nitride semiconductor crystal substrates are grown at a rate of at least 10 μm/hr but not more than 300 μm/hr.

Claim 20 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that said Group III nitride crystal substrates have an impurity concentration that is not more than 5×10^{19} cm^{-3}.

Claim 21 (previously presented): The method of manufacturing a Group III nitride semiconductor device recited in claim 12, characterized in that an off angle between the principal face of said Group III nitride crystal substrates and whichever of their (0001) face, $(1\bar{1}00)$ face, $(11\bar{2}0)$ face, $(1\bar{1}01)$ face, $(1\bar{1}02)$ face, $(11\bar{2}1)$ face, or $(11\bar{2}2)$ face is 0° or more but not more than 4°.

Claim 22 (withdrawn): A Group III nitride semiconductor device manufactured using a method of manufacturing a Group III nitride semiconductor device recited in claim 12.

Claim 23 (withdrawn): The Group III nitride semiconductor device recited in claim 22, characterized in that a roughened surface is formed in on the back side of said Group III nitride semiconductor crystal substrate.

Claim 24 (withdrawn): The Group III nitride semiconductor device recited in claim 23, characterized in that the surface roughness R_{P-V} of said roughened surface formed on the back side of said Group III nitride semiconductor crystal substrate is at least 0.01 μm but not more than 50 μm.

Claim 25 (withdrawn): A light-emitting appliance comprising a Group III nitride semiconductor device recited in claim 22, characterized in that:

said Group III nitride semiconductor device is furnished with said Group III nitride semiconductor crystal substrate, an *n*-type Group III nitride semiconductor

layer on a first principal face side of said Group III nitride semiconductor crystal substrate, a *p*-type Group III nitride semiconductor crystal layer located farther from said Group III nitride semiconductor substrate than is said *n*-type Group III nitride semiconductor crystal layer, and a light-emitting layer that is located between said *n*-type Group III nitride semiconductor crystal layer and said *p*-type Group III nitride semiconductor crystal layer;

said Group III nitride semiconductor crystal substrate has a resistivity of 0.5 Ω·cm or less; and

said *p*-type Group III nitride semiconductor crystal layer side is mounted down, and light is irradiated from a second principal face, being the principal face on the side of said Group III nitride semiconductor crystal substrate opposite said first principal face.

Claim 26 (withdrawn): A light-emitting appliance comprising a Group III nitride semiconductor device recited in claim 22, characterized in that:

said Group III nitride semiconductor device is furnished with a GaN substrate being said Group III nitride semiconductor crystal substrate, an *n*-type $Al_xGa_{1-x}N$ layer ($0 \leq x \leq 1$), being an *n*-type Group III nitride semiconductor layer, on a first principal face side of said GaN substrate, a *p*-type $Al_xGa_{1-x}N$ layer ($0 \leq x \leq 1$), being a *p*-type Group III nitride semiconductor crystal layer, located farther from said GaN substrate than is said *n*-type $Al_xGa_{1-x}N$ layer, and a light-emitting layer located between said *n*-type $Al_xGa_{1-x}N$ layer and said *p*-type $Al_xGa_{1-x}N$ layer;

the dislocation density of said GaN substrate is not more than $10^8/cm^2$; and

said *p*-type $Al_xGa_{1-x}N$ layer side is mounted down, and light is irradiated from a second principal face, being the principal face on the side of said GaN substrate opposite said first principal face.

Claim 27 (withdrawn): A light-emitting appliance comprising a Group III nitride semiconductor device recited in claim 22, characterized in that:

said Group III nitride semiconductor device is furnished with a AlN substrate being said Group III nitride semiconductor crystal substrate, an *n*-type $Al_xGa_{1-x}N$

layer ($0 \leq x \leq 1$), being an *n*-type Group III nitride semiconductor layer, on a first principal face side of said AlN substrate, a *p*-type $Al_xGa_{1-x}N$ layer ($0 \leq x \leq 1$) being a *p*-type Group III nitride semiconductor crystal layer located farther from said AlN substrate than is said *n*-type $Al_xGa_{1-x}N$ layer, and a light-emitting layer located between said *n*-type $Al_xGa_{1-x}N$ layer and said *p*-type $Al_xGa_{1-x}N$ layer;

the thermal conductivity of said GaN substrate 100 W/(m·K) or more; and

said *p*-type $Al_xGa_{1-x}N$ layer side is mounted down, and light is irradiated from a second principal face, being the principal face on the side of said AlN substrate opposite said first principal face.

Claim 28 (new): The Group III nitride semiconductor device manufacturing method recited in claim 12, wherein:

the Group III nitride semiconductor crystal substrates constituting the Group III nitride semiconductor ~~crystals~~ devices each comprise a first principal face where the device-forming Group III nitride semiconductor crystal layer is formed, and a second principal face, being a principal face on the reverse side of substrate from the first principal face and having a rectangular light-radiating face;

the Group III nitride semiconductor crystal substrates are *n*-type doped with silicon atoms and/or oxygen atoms, at a density of between 5×10^{18} cm^{-3} and 2×10^{19} cm^{-3};

the substrates are each between 200 μm and 600 μm thick; and

the width in both directions of the rectangular light-radiating face on each second principal face is not more than 50 mm.

Claim 29 (new): The Group III nitride semiconductor device manufacturing method recited in claim 12, wherein:

the Group III nitride semiconductor crystal substrates constituting the Group III nitride semiconductor ~~crystals~~ devices each comprise a first principal face where the device-forming Group III nitride semiconductor crystal layer is formed, and a second principal face, being a principal face on the reverse side of substrate from the first principal face and having a rectangular light-radiating face;

the Group III nitride semiconductor crystal substrates are *n*-type doped with silicon atoms and/or oxygen atoms, at a density of between 3×10^{18} cm^{-3} and 5×10^{18} cm^{-3};

the substrates are each between 400 μm and 600 μm thick; and

the width in both directions of the rectangular light-radiating face on each second principal face is not more than 3 mm.

Claim 30 (new): The Group III nitride semiconductor device manufacturing method recited in claim 12, wherein:

the Group III nitride semiconductor crystal substrates constituting the Group III nitride semiconductor ~~crystals~~ devices each comprise a first principal face where the device-forming Group III nitride semiconductor crystal layer is formed, and a second principal face, being a principal face on the reverse side of substrate from the first principal face and having a rectangular light-radiating face;

the Group III nitride semiconductor crystal substrates are *n*-type doped with silicon atoms and/or oxygen atoms, at a density of between 5×10^{18} cm^{-3} and 5×10^{19} cm^{-3};

the substrates are each between 100 μm and 200 μm thick; and

the width in both directions of the rectangular light-radiating face on each second principal face is not more than 3 mm.

Claim 31 (new): The Group III nitride semiconductor device manufacturing method recited in claim 12, wherein:

the Group III nitride semiconductor crystal takes the form of a hexagonal plate, a rectangular plate, or a triangular plate; and

the angle θ that the flat-plate lower surface and lateral surface form is an angle between 30° to 60°.